STATE OF NORTH CAROLINA
DEPARTMENT OF INFORMATION TECHNOLOGY

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Submitted by: The North Carolina Broadband Infrastructure Office

Responses:

Objective 1.1: Based on its authority, the FCC can further accelerate broadband adoption in the health care context by providing access to funding or partnerships with other federal agencies to launch pilot projects testing different methods for accelerating broadband adoption through healthcare among different populations. In addition, the FCC should invest in digital literacy trainings for populations, like seniors, who are heavily dependent upon healthcare systems but often lack in digital literacy skills. Assisting seniors in learning how to use the internet and internet-enabled devices to improve their health outcomes would result in more effective deployments of digital health solutions.

One of the largest impediments to adoption are the low levels of digital literacy skills amongst the very people digital healthcare tools could help the most—rural populations, low-income citizens, and senior citizens. Other well-document impediments include the affordability of internet service and devices and the fact that internet access isn't available in many areas of the country still.

Objective 1.2: In North Carolina, broadband-enabled services and technologies most frequently take the form of telehealth and digital health technologies. We know of at least 18 different startups based in North Carolina who are helping healthcare organizations deliver care through internet-based technologies. North Carolina has a mix of companies delivering care through the four main categories of telehealth: live video, remote patient monitoring, store and forward, and mobile health (or mhealth). North Carolina also has companies that have created digital health technologies to assist healthcare providers. For example, Axial Exchange, based in Raleigh, NC, created a platform that connects patients to healthcare providers using EHR data. They have a host of clients including the NC hospital system, WakeMed.

Another local example, RelyMD, is designed and run by a local group of emergency room doctors (called WEPPA). They created a secure HIPAA compliant video platform over which they can deliver care to people who have unplanned health episodes but are non-acute cases that often end up in ERs. And if the doctor designates the case as acute, they streamline the process for hospital admittance for the patient.

In addition, NC's university hospitals and doctors of many different specialties deliver care using online tools to treat a number of conditions. For example, one of NC's universities, East Carolina

University, delivers psychiatric assistance to patients across the state from their Center for Telepsychiatry and E-Behavioral Health.

Objective 1.4: There are many technical issues concerning the variety of broadband enabled healthcare solutions and technologies that the FCC should consider as it strives to accelerate broadband adoption and promote health IT solutions. In particular, the FCC should consider the fact that as reported in the latest Broadband Progress Report issued by the FCC, 10 percent of all Americans still lack access to high-speed broadband and 39 percent of rural Americans lack access. Based on this same report, we estimate at least 738,306 North Carolinians lack access. Because access is not yet available to all, the expected benefits of digital healthcare technologies will not be fully realized. In addition, many healthcare applications utilize more bandwidth than other applications, thus necessitating a higher level of reliability, capacity and speeds than is available in many areas. Continuing to promote competition, and the expansion of high-speed networks and technologies capable of continuous scaling of speeds will be essential in increasing the use of digital healthcare technologies. Finally, the data transferred via EHRs and other types of digital files is and remains secure of the utmost importance as it is highly sensitive and should be protected.

Objective 1.6: Cost, a lack of sustainable funding, training, and a lack of time or capacity all often impede healthcare organizations ability to implement digital solutions and tools to increase positive health outcomes in their communities. Some digital health technologies are too expensive for healthcare providers to adopt. Others are just too burdensome for the physicians to add to their current responsibilities. For example, Rex Hospital in North Carolina staffs a remote cardiac clinic in Eastern North Carolina for patients who received care in their hospitals to visit for follow-up appointments. Once in the clinic, the patients interact with doctors and providers via a tablet and a telemedicine platform, TouchCare. Through the platform they can see the on-call physician who can perform an exam, prescribe any needed medications, and arrange follow-up care if needed.

While convenient for the hospital and patients in general, the physicians spend a great deal of time explaining the service to the patient, training them how to use the tablet to interact with the doctor, walking the patients through insurance requirements and reimbursements for telemedicine services and other questions and concerns the patients may have related to the technology. Being a large hospital system, Rex possessed the resources to hire and train a physician to dedicated to remote practice and teaching patients to use the services provided there. However, smaller, less financially secure healthcare establishments may not have the necessary resources to fund the same level of hands-on training Rex provides.
To address these issues, the Commission could invest in training for digital health technologies for consumers and physicians.

Objective 1.9: The impediments to making health IT and other broadband health technology services available and ubiquitous in rural and remote areas are many but include the lack of the availability of broadband in those areas, the low wealth that often accompanies rural areas, and the lower number of healthcare facilities in nearby locations.

The FCC should consider leveraging its authority to encourage broadband providers to expand and upgrade their networks in unserved and underserved areas. The FCC should also encourage providers to offer or advertise their current offerings of reduced-rate service for low-income populations. In addition, the FCC should provide clear, concise information on the Lifeline eligibility for consumers so they can better understand what their options for utilizing Lifeline are. And the FCC should provide more clear guidance on how Lifeline can be aggregated to help low-income communities obtain service.

Objective 2.10: Hundreds of broadband-enabled health technologies and medical devices are currently on the market, and new products are hitting the market daily (see response to Objective 1.2 for NC examples). Venture capital investments in the digital health industry—a good measure of interest in the industry—are on track to hit a five-year high this year according to CB Insights. Wearables, remote patient monitoring tools, and telemedicine tools comprise the bulk of the industry right now. Future trends are likely to be IoT (internet of things) devices and big data analytic platforms.

Objective 2.16: Regulatory barriers concerning the deployment of advanced, broadband-enabled health care technologies and medical devices include that digital health technologies often operate outside of insurance and reimbursement models. The FCC could collaborate with the U.S. Department of Health and Human Services, the Centers for Medicare and Medicaid Services, the NTIA, the SBLN, lawmakers, and other regulators to prepare recommendations on how to best integrate broadband-enabled health care technologies and devices into current insurance and reimbursement models.

Objective 4.24: To increase consumer awareness about the value proposition of broadband in the healthcare sector for consumers, the Commission can fund directly or establish collaborative funding mechanisms to establish or support existing digital literacy programs for patients who seek to learn how to use the digital health tools their medical provider offers. As far as we are aware, no such program exists in North Carolina yet, but we are investigating how to best create one with our partner, Kramden Institute. Should the FCC seek a state to work with on this or another similar initiative, North Carolina would be happy to participate in the partnership.

Objective 4.25: Per research from the Pew Research Center, the primary barrier to broadband adoption in the home is cost of the subscription. While broadband adoption does not equate healthcare technology adoption, those without broadband in their homes are less likely to use online tools. The Center also reports that smartphone adoption and technology use has risen among the senior population so should they be introduced and trained on how to use the healthcare technologies, perhaps they would adopt it.